

METHOD FOR REACTIVE ION ETCHING OF NIOBIUM ON SILICON

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Inventor: REDKIN S V (SU); YUNKIN V A (SU); RAPPO L N (SU); STARKOV V V (SU)
Applicant: INST T MIKROELEKTRONIKI I OSOB (SU)
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Reactive ion etching of niobium on silicon - includes adding chlorine
-containing gas-forming compound into plasma of fluorine containing
compound and oxygen and etching

Patent Assignee: AS USSR MICROELTRN ULTRAPURE CPDS INST (ASMI-R)

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Abstract (Basic): SU 1289305 A

Reactive ion etching of niobium on silicon includes processing
silicon samples in the plasma of a fluorine -containing compound and
oxygen during a reduced pressure. A chlorine -containing compound is
additionally introduced into the plasma during a volume ratio with the
fluorine -containing gas of (0.1-1) : 1. Reactive ion etching process
is carried out during a power density of a discharge of 0.06-1.45 watts
per square cm. During a power on a unit surface of 0.01-1.45 watts per
square cm. the rate of etching of the niobium on the silicon is 130-600
nm per minute.

USE - Used in forming topology of functional layers during
production of integrated circuits and other semiconductor devices.

ADVANTAGE - Increased rate of etching is achieved.

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Title Terms: REACT; ION; ETCH ; NIOBIUM ; SILICON; ADD; CHLORINE ;
CONTAIN; GAS; FORMING; COMPOUND; PLASMA; FLUORINE ; CONTAIN; COMPOUND;
OXYGEN; ETCH

Derwent Class: L03; U11

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